



The Consolidation of Defense Specialized Firms

*A view through a New
Institutional Economic
window*

24 April 2003

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Professor, Defense Acquisition Univ
PhD Student George Mason Univ



Outline

- **Intro**
 - **Driessnack's background and the Research Team**
 - **DAU Research ... the need for policy impact and some \$\$**
- **Overall thoughts and current International Society New Institutional Economics Conference (ISNIE, Sept 03) Paper**
- **Reflection on Roadmap Report, Feb 2003**
 - **Expand current thoughts to Industrial Policy reports**
- **Other areas and general discussion**

Driessnack's Background

- Education/Training and Industry Certifications
 - BS Industrial Engineering...Penn State Univ
 - MS Economics...Wright State Univ
 - DoD Acquisition Level III in PM, FM, and Logistics
 - PM Professional – PM Institute (PMI)
 - Cost Estimator – Society Cost Estimators and Analysis (SCEA)
 - PhD Student - Economics – George Mason University
- DoD Acquisition Experience
 - 12 years in SPOs - 7 yrs on ACAT 1D Joint Service programs
 - Navy lead ASPJ, Marine lead V-22, Army/AF lead GBS
 - Acting PM of ACAT1D GBS during 5 month restructure
 - 6 years on Center (AFALC, ESC) and FOA (AWS) staffs
- DAU Responsibilities
 - Instructor PMT-250/352 Tools/Office courses, Exec level – Risk/AP
 - Program Support ...Acq Structures, PM Tools, Risk, MBTI
 - Research Project related to Acquisition Oversight/Space Commission Implementation, Missile Defense Agency, Defense Industry
 - Editor PMCOP and Risk Community (Web Knowledge Sites)



Research Team

Professor John Driessnack, Lt Col, USAF

- **Defense Acquisition University - PM & Leadership Dept**
 - Teaching in Acq Policy, Risk, and PM Tools
 - Economist (PhD student at GMU) - New Institutional Economics

Professor (Dr) Mike Greiner, Maj, USAF

- **AF Institute of Technology - Sys & Eng Manage Dept**
 - Teaching in Cost and Risk Analysis
 - Doctorate in Industrial Engineering

Dr David King, Maj, USAF

- **SAF/AQ Staff**
 - Focus on Mergers and Acquisitions, Strategic impact of innovation
 - Doctorate in Strategic Management



DAU Research Projects

Impact on Weapons Programs efficiency

- **Space Commission Recommendations - will they improve the performance of weapon systems acquisition (NE-FD-R-0006-02)**
 - **Research Question: Will the institutional and organization changes recommended in the Space Commission report have the potential to measurably (cost, schedule and performance) improve the acquisition of Space systems**

Impact on Defense Industry efficiency

- **Synergy Creation in the Acquisition of High-Technology Firms (NE-RES-013-XX-R1-03)**
 - **Research Question: What conditions contribute to increased post-acquisition performance for firms acquiring high technology targets?**
 - **Evolving topic to specifics on Defense Firm efficiency and the industries consolidation**
-



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Paper for ISNIE conference

Approach/Expansion

- Outline history of defense industry consolidation
- Explore alternative framework that considers...
 - Institutional RULES (policies and regulations)
 - MECHANISMS of Exchange (buyers structures and methods)
 - TECHNOLOGY (Systems to Joint System of Systems)
- Historical view...generally temporally align events
 - Discuss cause and effects ... and the polycentric game
 - Take a North historical view of the evolution of change
- Conclusion - consolidation is efficient reaction to market
- Future expand with specific Case Studies
 - Specific defense firms on specific decisions
 - Defense players on specific decision



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Feb 2003 - A Roadmap

Expand the Economic Framework

■ Study Objectives:

- Build on operational goals for transformation...
- Case Studies of emerging defense suppliers ...
- **Gain insight** from legacy suppliers...capture characteristics
- Offer a **roadmap** for the defense industrial base...

■ Recommends the DoD consider:

- View of effects-based **sectors**
- **Decision processes** to optimize effects - not programs
- Evaluate investment and **competitive** issues

Emphasis on Market is a Traditional Economic Fram



Traditional View

Defense an inefficient unique market

- Adjust policies so we get the market mechanism correct
- Most (Peck and Scherer, Gansler, Fox...) have varying recognition of problems applying “market” mechanisms
- Rogerson ‘94 - economic approach in literature
 - “incentives...overlooked by economists...key to explaining some of the most puzzling inefficiencies in defense procurement.” **In comparison to what?**
 - “even if competition must eventually be sacrificed, ... recover some of the economic profits” **Monopoly profit concerns?**
 - “TINA cannot force defense contractors to review the lowest possible costs...” **What about Monopsony power?**
 - “no analog to profit or stock market value ...” **How different than multidivisional firm (GE)? Also look at Public Choice!**



Defense Industry Assessments

Gansler 1980's Specific Objective

- **Outlines 5 historical objectives**
 - **Provide maximum deterrent and battle capability for dollar allocated. Calls this allocative efficiency**
 - **Achieve maximum production efficiency, long and short, given resources. Calls this avoiding waste**
 - **Provide sufficient surge capability**
 - **Achieve maximum technological advancement**
 - **Minimize adverse effects on society and the politics process. The industry-government structural relationship**

- **Suggests a single object:**
 - **Producing defense equipment during peacetime with **economic efficiency**, while recognizing the other four**



Alternative Views

A look through the Nobel Prize

- **86, James Buchanan - Public Choice Theory**
 - **“look to the structure within which political decisions are made ... examine the rules, the constraints within which political agents act”**
- **91, Ronald H. Coase - Transaction Costs/Property Rights**
 - **“examine the role which the firm, the market, and the law play in the working of the economic system”**
- **93, Douglass C. North - Explain institutional change**
 - **“what institutions are, how they differ from organizations, and how they influence transaction and production costs is the key to much of the analysis”**

**New Institutional Economics (Coase/North)
framework in an environment highly influenced
by Public Choice**



Alternative Views

Is not the Visible Hand efficient

- **Alfred D Chandler wrote The Visible Hand, The Managerial Revolution in American Business, 1977**
 - **“The Sherman Act ...provided a powerful pressure that did not exist elsewhere to force family firms to consolidate their operations into a single, centrally operated enterprise administrated by salaried managers.” A rule in the game!**
 - **“Until economists analyze the function of administrative coordination, the theory of the firm will remain essentially a theory of production.” How we look at efficiency, just production or also the “coordination” function of the Defense Prime**

Firm (visible) is more efficient than the market (invisible)



The Consolidation Situation

Should we be concerned?

- From 1980 to 2001 over 60 firms consolidate (M&A) to 5
- Literature, Government reports focus on “competition”
 - Rogerson (94) focus on “puzzling inefficiencies in defense procurements”...recognized many issues but “*Merger Policy*” still focus’d on “**maintaining competition** for the “final round” (production vis R&D)
 - GAO Report (98), Consolidation and Options for **Preserving Competition**
 - Transforming the Defense Industrial Base: A Roadmap, Feb 2003
 - “normal market response to reduced demand, driven by the post-Cold War defense budget drawdown of the 1990s”
 - Recommend “operational effects-based sectors”
 - Another product view still concerned with competitions



The Desire for “Competition”

“I worry about the technology base in this country. The degree of competition is declining in the defense industry. The longer the large defense contractors deal with the Defense Department, the more they become like the Defense Department – and I don’t say that as a compliment. They get big and slow and sluggish and bureaucratic. The energy and vitality that we see in smaller niche segments in our society, in technology, tends not to deal with government because ... dealing with government is just a put-off. Who in the world wants to do it if he can avoid it? It’s burdensome. It’s ugly. It takes forever to get anything done. Delay helps the big companies, because they’ve got all the lawyers and all the lobbyists and all the people in Washington. Smaller companies don’t have the time to do all of that. That means that government tends not to have the kind of interaction with the creativity and innovation that exists in our society.”

– Secretary of Defense Donald H. Rumsfeld
November 18, 2002

Does this apply to just Defense Specialize Firms?

Why does the market reward big firms!

Should we have small start up car or energy firms?

The overall impression of bureaucratic systems as

Integrity - Service - Excellence

inefficient, but are

Lockheed Martin

- CD Fu. Wash.
- MIL Defense Systems
- Sanders Associates
- Lockheed
- GE Aerospace Business
- Marin Mariva
- Card Ocean Systems
- CD Space Systems
- Honeywell (Electric Optics)
- Fairchild Weston Systems
- Loral
- Goodrich Aerospace
- IBM International
- Litton
- LTV (Missile Business)
- IBM Federal Systems
- Unis (Defense Electronics)
- Conrad

Boeing

- Boeing
- Hughes Electronics Satellite
- Japanesen Satellite
- Hughes Helicopters
- McDonnell Douglas
- Boeing
- Argo Systems
- Union Precision Gear
- Rockwell International - Aerospace
- Aeroflex

Raytheon

- Marine Sys. Co. of Alton Tex.
- CNE Link
- Raytheon Electronics
- CD Missile Business
- Rockwell International
- Hughes Aircraft
- CM Hughes Aircraft
- Corporate Inst.
- Raytheon
- E-Systems
- Chrysler Tech. Airborne
- TI Defense

Northrop Grumman

- Northrop Grumman
- Aviation Industries
- TASC
- PAC
- Q Defense
- Union Industries
- Vortex (Satellite Sys. Elec.)
- Sperry Marine (Chicago)
- Grumman
- Northrop
- Veitch Aircraft
- Westinghouse Defense
- Spycon
- Lyncon
- Goodyear
- Ryan Aeronautical
- Compu
- Radical Data
- Savient Software
- Aerodyne
- Weapon Moves Shipping
- TRC

General Dynamics

- General Dynamics
- Pratt & Whitney Technologies
- CTS Gen. Systems
- INSCO Holdings
- Tektron Vehicle Systems
- Bush Iron Works
- Crown Aircraft
- Chrysler Defense
- General Dynamics
- Corbin's Computing Devices Int'l
- Defense & Aeronaut. Sys.
- Advanced Technology Sys.
- Gulf Stream Aerospace
- K-C Aviation
- Cotter Aerospace
- Minerals Info Sys. Group

Timeline: 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001

First Wave (1980-1990) **Second Wave** (1990-2001)

**Final Report on the
Commission on the Future of
the Aerospace Industry, pg 7-4**



GAO Report 98

"...Preserving Competition"

Sector	Reduction in contractors	1990 contractors	1998 contractors
Tactical missiles	13 to 4	Boeing Ford Aerospace General Dynamics Hughes Lockheed Loral LTV Martin Marietta McDonnell Douglas Northrop Raytheon Rockwell Texas Instruments	Boeing Lockheed Martin Northrop Grumman Raytheon
Fixed-wing aircraft	8 to 3	Boeing General Dynamics Grumman Lockheed LTV Aircraft McDonnell Douglas Northrop Rockwell	Boeing Lockheed Martin Northrop Grumman
Expendable launch vehicles	8 to 2	Boeing General Dynamics Lockheed Martin Marietta McDonnell Douglas Rockwell	Boeing Lockheed Martin
Satellites	8 to 5	Boeing General Electric Hughes Lockheed Loral Martin Marietta TRW Rockwell	Boeing Lockheed Martin Hughes Loral Space Systems TRW

Surface ships	8 to 5	Avondale Industries Bath Iron Works Bethlehem Steel Ingalls Shipbuilding NASSCO Newport News Shipbuilding Tacoma Tampa	Avondale Industries General Dynamics (Bath Iron Works) Ingalls Shipbuilding NASSCO Newport News Shipbuilding
Tactical wheeled vehicles	6 to 4	AM General Harsco (BMY) GM Canada Oskosh Stewart & Stevenson Teledyne Cont. Motors	AM General GM Canada Oskosh Stewart & Stevenson
Tracked combat vehicles	3 to 2	FMC General Dynamics Harsco (BMY)	General Dynamics United Defense LP
Strategic missiles	3 to 2	Boeing Lockheed Martin Marietta	Boeing Lockheed Martin
Torpedoes	3 to 2	Alliant Tech Systems Hughes Westinghouse	Northrop Grumman Raytheon
Rotary wing aircraft	4 to 3	Bell Helicopters Boeing McDonnell Douglas Sikorsky	Bell Helicopters Boeing Sikorsky

Notes: In July 1997, Lockheed Martin announced that it planned to combine with Northrop Grumman. On March 23, 1998, the Department of Justice filed suit to block the acquisition of Northrop Grumman by Lockheed Martin.

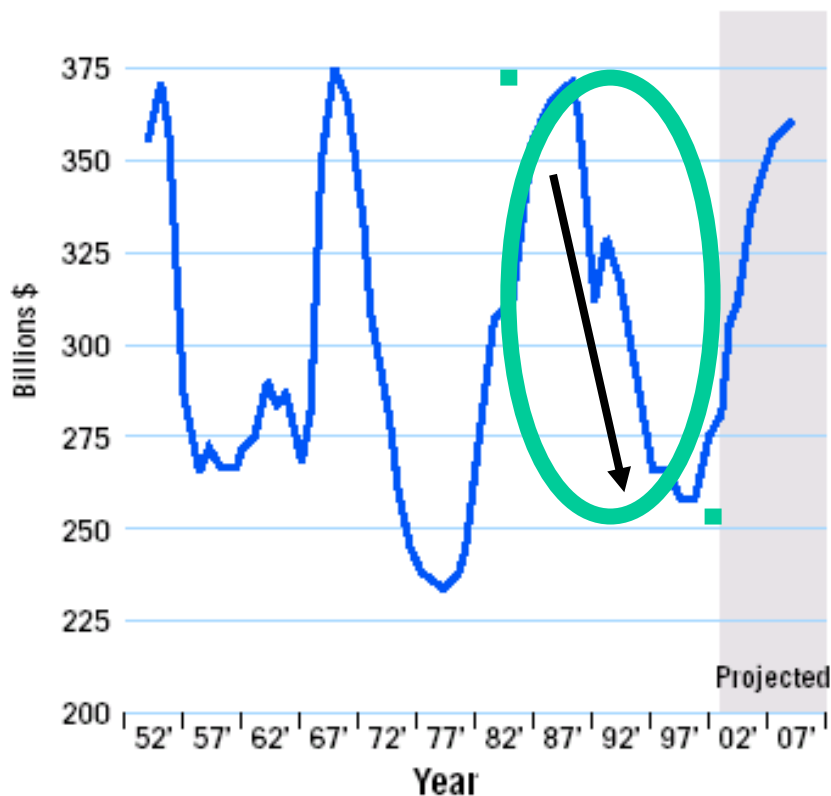
Defense electronics is not included as a market sector.

Source: Our analysis of DOD data.



History of “Outlays” Did this cause consolidation?

Figure 7-1 Defense Outlays from 1952-2007 in constant FY 1996 dollars



Source: FY03 Budget of the U.S. Government, Historical Tables

For the past half-century, the U.S. aerospace and defense industry has been inextricably linked to a defense budget characterized by a “10 years up, 10 years down” cycle. A vibrant, productive, enduring enterprise is not consistent with this “boom-and-bust” cycle, and aerospace companies must be vibrant, productive, and enduring. Our armed forces rely on advanced technology for awareness, protection, and instruments of action. Our government must provide for the many needs of our society, so value for money efficiently spent on security must be demonstrated. Our aerospace systems are designed to perform for decades, with some extending through a half century of service, and companies must be in a position to support customers through their evolving and demanding missions.

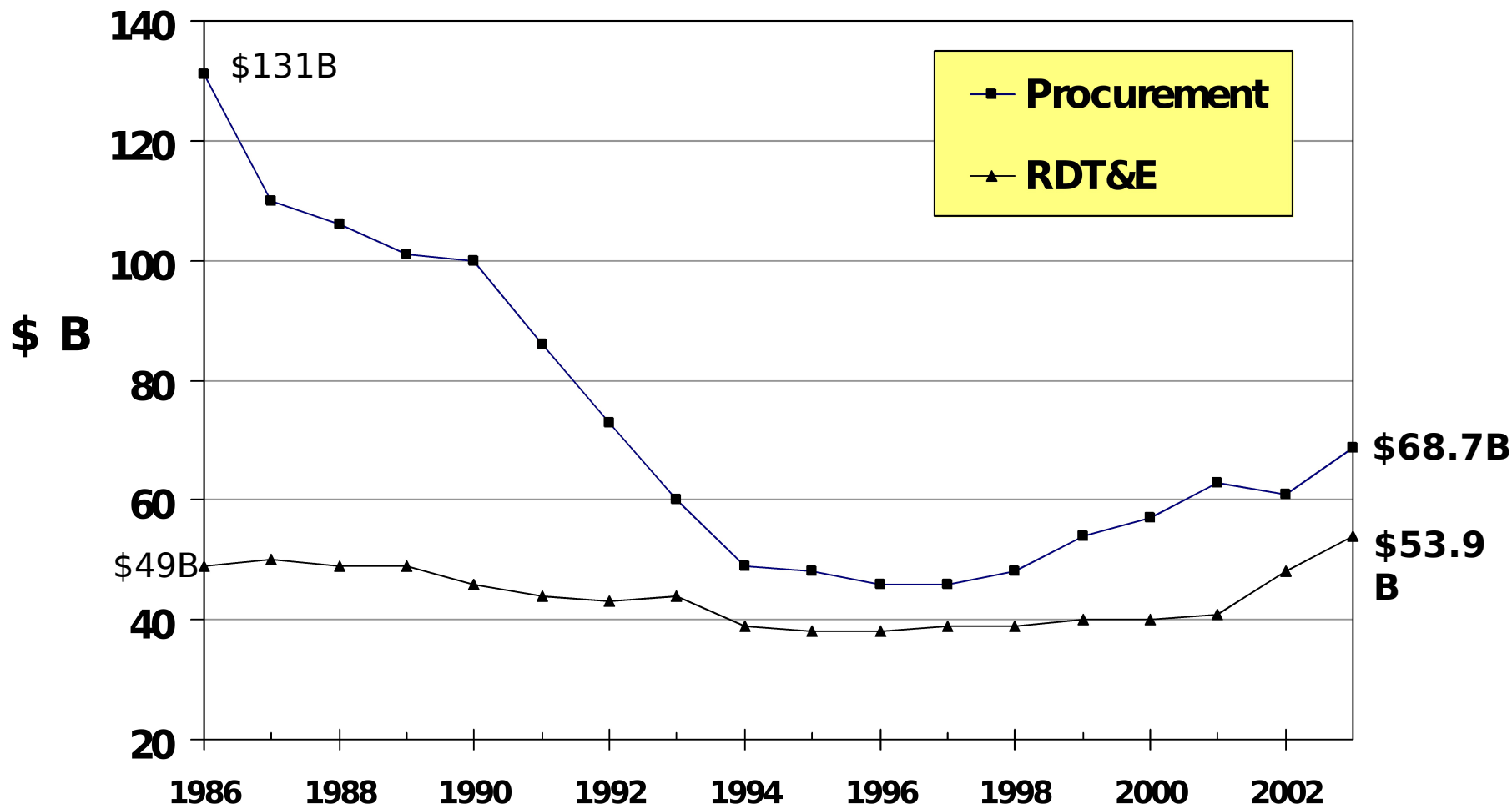
Historically, investors have characterized the aerospace industry, including the commercial business, as a low-growth sector, chronically hampered by high cyclicality, low margins, revenue instability, and inadequate returns on investment, amplified by the uncertainty in the government budgeting and acquisition process.

Final Report on the Commission on the Future of the Aerospace Industry, pg 7-1



Procurement & RDT&E Budget Authority 1986- 2003

constant FY 2003 \$ billions



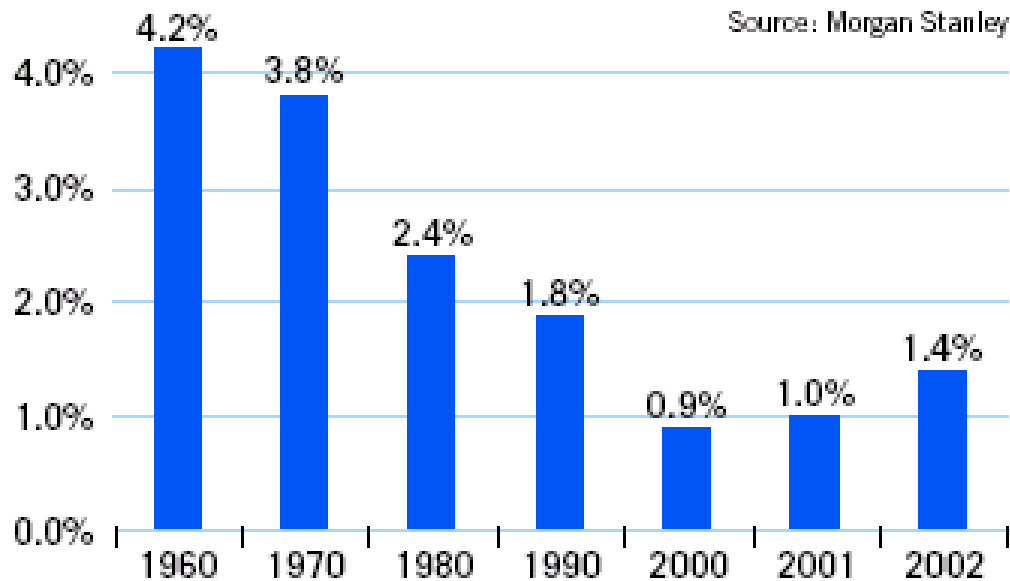
Fiscal Year

Integrity - Service - Excellence



History of Overall Market Defense Sector Decreasing Share

**Figure 7-2 Aerospace/Defense Sector as a
Percentage of the S&P 500 Market Cap**



**Commercial firms saw
defense sector as
alternative during
“period of instability”
during WWI and WWII
and Korea. Defense
predominate
specialization started
when? Why?**

**1950's - Eisenhower's
speech on the
Defense Industrial
complex!**

Final Report on the Commission on the Future of the Aerospace Industry, pg 7-2



The Consolidation Situation

Measure of Efficiency ?

- When does competition not improve efficiency
- Tradeoffs between
 - Enhancing competition ...markets' "invisible hand"
 - Exploiting synergies ...firms' "visible hand"
- Understand the drivers of transaction costs
 - What "arenas of choice" are they in (McGinnis, 2000)
 - Operational - selection of the contractor
 - Collective - the rules by which you can select the contractor
 - Constitutional - the rules by which you can make the rules
 - Analysis efficiency of the polycentric game !
 - Is the comparison with reasonable alternatives
 - Performance of management "operationally" given the institutions
 - Comparison with reasonable alternative games or different game!



Transaction Cost Drivers

- **Specificity of Investments**
 - Changing threats, evolving requirements ... 9/11 focus changes
- **Frequency and Duration of Transactions**
 - Low quantity buys, could be first and only, annual budget process
- **Complexity of Transaction/Uncertainty of Performance**
 - Cheyenne Mountain upgrade... 6 major programs combined
 - ESC (1 of 10+ centers) spends 4 times the big dig annually
- **Difficulty of Measuring Performance**
 - Effectiveness in warfare under world wide conditions
- **Connectedness of Transaction to Other Transactions**
 - Integrated C3I (Command, Control, Comm, Intelligence) System



Political Transaction Costs

Dixit (96)

- **1st Best**
 - **Complete access to all information and the drive to achieve the most efficient and beneficial outcome for all participants (Coasean Bargaining)**
- **2nd Best**
 - **There is asymmetrical access to information but all participants are allowed to get together and develop a combined incentive scheme**
- **3rd Best**
 - **An increased number of participants are involved and there is asymmetrical access to information which makes the possibility of an overall beneficial; scheme more difficult as the number of participants increases**



Assumption of inefficiency

Is the Acq Process wasteful

- Williamson (1996, p. 195) calls for a “remediable-ness” saying “an outcome for which no **feasible superior alternative** can be described and implemented with net gains is presumed to be efficient”
- Dixit (1996, p 40) “Many inefficient practices of firms, and their markets on contract outcomes, are revealed on closer scrutiny to be quite **creditable attempts** to cope with **difficult transaction costs problems**. Therefore one should not jump from the observation of an apparent inefficiency to the assertion of a remedy; one should **examine the organization of firms and the institutions of transactions more closely to look for any mechanisms to cope with transaction costs**, and ask how well they do their job.”



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Three Major Decision Support System

(Management Systems That Control The Program Manage

	Requirements Generation	Defense Acquisition		PPBS-Resource Management
		<u>Life Cycle Management</u>	<u>Contract Management</u>	
RULES	CJCSI 3170.01B	DoD 5000 SERIES	FAR DFARS	DPG/POM/BUDGET DoD 7000 SERIES
PLAYERS	USER/SVC CHIEF VJCS/JROC	PEO/CAE/DAE	PCO/HCA/SPE CAG/DCMA	PEO/SVC HQ/OSD OMB/CONGRESS
REVIEWS	JROC	MILESTONE	BUSINESS	DRB
DECISION	MSN NEED	NEXT PHASE	CONTRACTS	FUNDING
FOCUS	THREAT/ CAPABILITY	SYS LIFE CYCLE R&D/PROC/O&S	CONTRACTOR PERFORMANCE	ANNUAL FUNDING

How do these effect the defense industry

Acquisition Management - Key Players

	ARMY	NAVY	USMC	AIR FORCE
SERVICE ACQUISITION EXECUTIVE (SAE)	Assistant Secretary Of The Army (ALT)	Assistant Secretary Of The Navy (RDA)	Assistant Secretary Of The Navy (RDA)	Assistant Secretary Of The Air Force (ACQ)
PROGRAM EXECUTIVE OFFICERS (PEO's)	•Intelligence, Electronic Warfare & Sensors •Chem/Bio Defense •Command, Control & Comm (Tactical) •Tactical Missiles •Air & Missile Defense •Ground Combat Systems •Aviation •Enterprise Info Systems •Combat	•Mine & Undersea Warfare •Theater Surface Combatants •Information Technology •Submarines •Tactical Aircraft Pgms •Air ASW, Assault & Special Mission Pgms •Strike Weapons & Unmanned Aviation •Aircraft Carriers •Expeditionary Warfare •Surface Strike	None	•Airlift and Trainers •Fighters & Bombers •Weapons •Command and Control •Services
MAJOR MATERIEL COMMANDS	•Service/Combat Support Systems •Army Materiel Command (AMC) •Comma	•Joint Strike Fighter (Reports to AFAE) •Naval Air Systems •Naval Sea Systems •Space and Naval Warfare •Naval Supply Systems	Marine Corps Systems Command (MARCORPSYSCOM)	Air Force Materiel Command
DEVELOPMENTAL TESTER	Army Test & Evaluation Command (ATEC)	•Naval Facilities Engineering	MARCORSYSCOM	AFMC
OPERATIONAL TESTER	Army Test & Evaluation Command (ATEC)	Operational Test & Evaluation Force (OPTEVFOR)	Marine Corps Operation Test & Eval Agency(MCOTEA)	Air Force Operational Test & Eval Center(AFOTEC)
HQ ACTION OFFICERS	DA Sys Coordinators (DASC) & PEO Liaison Officers, OASA(ALT)	Staff Officers OPNAV & OASNRDA	Staff Officers HQ USMC & OPNAV	Program Element Monitors (PEMs) OASAF(ACQ)
POLICY/GUIDANCE	AR 70-1 DA Pam 70-3	SECNAVINST 5000.2C		AF Policy Memos & Directives (various)

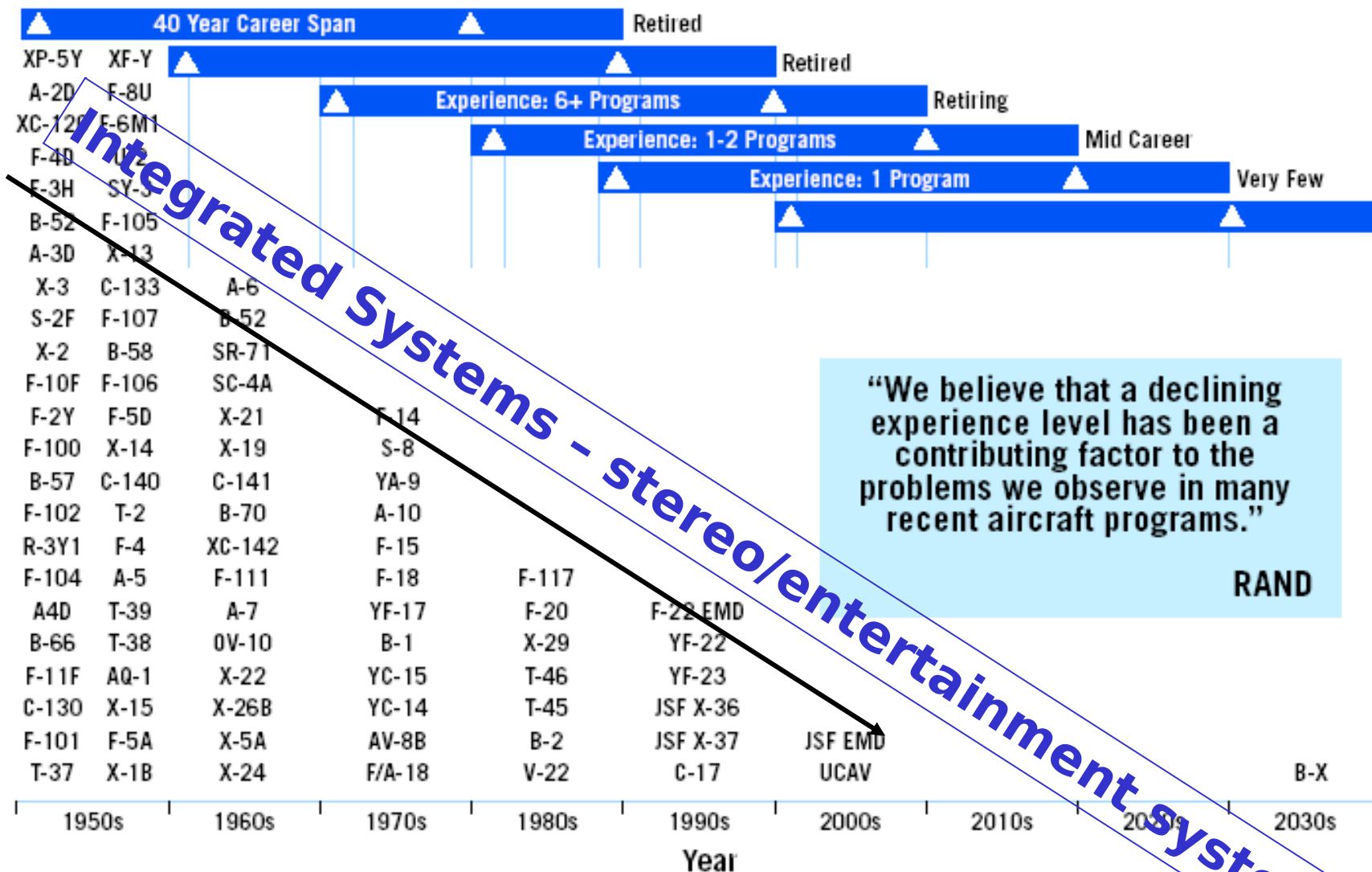
Evolution of Defense Acquisition

Policy

- **1969 - DSARC established by DEP SECDEF Packard.**
- **1971 - DoD Directive 5000.1, "Acquisition of Major Defense Systems".**
- **1975 - DoD Instruction 5000.2, "Decision Coordinating Paper and the DSARC".**
- **1976 - OMB Circular A-109, "Major System Acquisitions"**
- **1977 - DoDD/DoDI 5000.1/2 revised to incl. OMB Cir A-109. DoDI 5000.2 becomes "Major Systems Acquisition Process", implements 5000.1.**
- **1987 - Policies and procedures extended to "nonmajor" acquisition programs.**
- **1991 - DoD 5000.2-M issued with detailed formats for all documents. 5000.1/2 expanded to absorb over 60 other directives, instructions, and memoranda.**
- **1996 - DoD 5000.1 applies to all programs. DoDI 5000.2 replaced with DoD Regulation 5000.2, applies to major programs (mostly). DoD 5000.2-M eliminated. Major AIS programs included. Deskbook created. Components "empowered" for nonmajor programs.**
- **2000 - DoDI 5000.2 returns, implements revised DoDD 5000.1-**

ONE SIZE FITS ALL

Figure 4-3 Declining Experience Levels in Military Aircraft Programs
(Vertical Bars: Military Aircraft Program Starts, Horizontal Bars: Typical 40 Year Career Span)

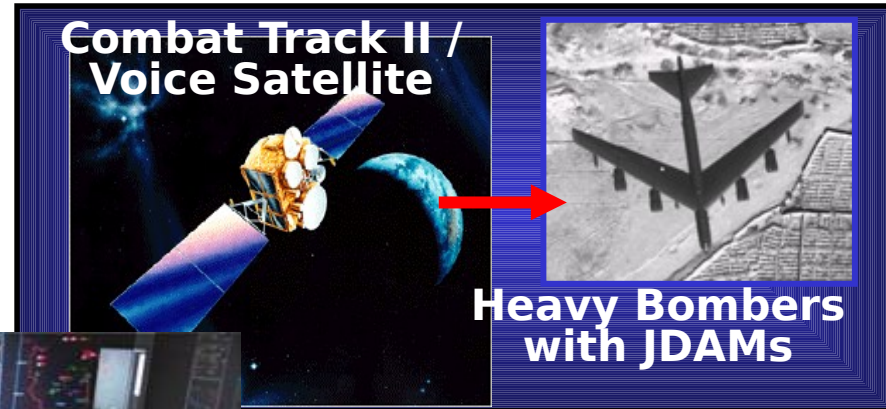


Source: RAND Study (Chart by Northrop Grumman, Aerospace Industries Association)

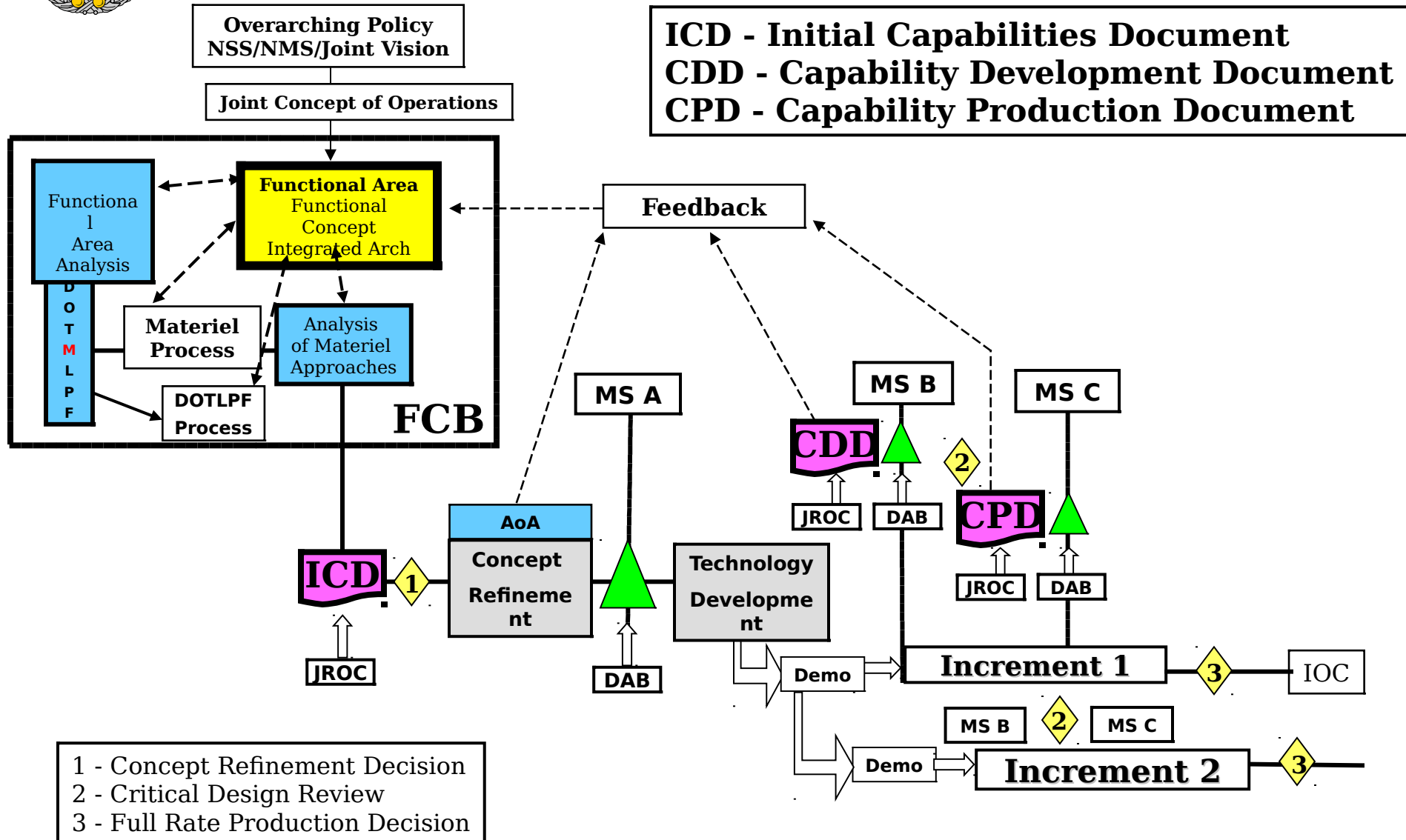
Final Report on the Commission on the Future of the Aerospace Industry, pg 4-11



Linking Technology, Doctrine, & Tactics **Enabled *Integrated Operations* in Afghanistan**



Exponential Increase in Integrated Operations Makes Possible





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Areas for Further Research

- **Model for Acquisition Capacity**
 - **Determine when to improve government capacity (and reduce transaction costs) or go to industry (prime determines)**
 - **Examples of government transactions vis industry**
 - **GFE engines to primes on major weapons...continues**
 - **ATE ... standards (MATE) vis equipment (CASS) approach**
- **Review DoD Transformation Bill...what changes will drive?**
- **More extensive look at subvendor relationships and impact of DoD acquisition policies and structures**
- **Requirements process...what will new CJCS 3170 do**
 - **Changes in how requirements evolve**
 - **Effects on acquisition programs and thus on industry**
- **PPBS process ... what color of money changes do**
 - **Look at MDA example of all RDT&E**



Discussion



Use of AFIT Masters Students

- **Student in AFIT Cost Analysis Program**
 - **Class every year with 15 + students**
 - **Start Sept 02 through Mar 04 (18 months)**
 - **Research activity Jan - Dec 03**
 - **Select topics narrow enough to complete**
 - **Add significant information to the data/literature**
- **FY03 focus on evaluating oversight processes**
 - **Develop Taxonomy (WBS) for oversights**
 - **Measure (obj/subjective) major areas**
 - **Following SPACE, C3I (RIT and non RIT) and Missile Defense Agency (MDA) programs**
- **Funding limited from DAU/AFIT ... need sponsors**



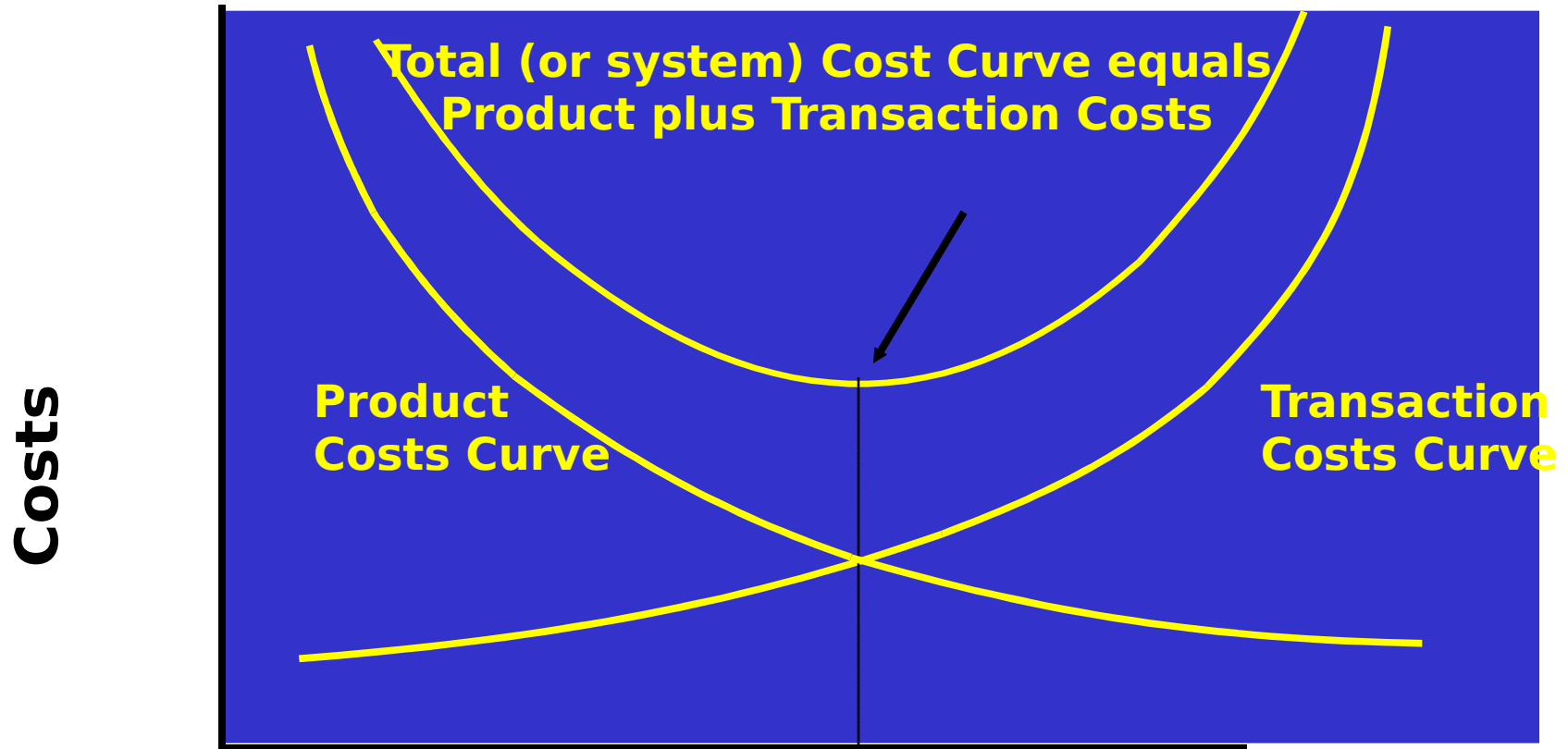
Acquisition Capacity Efficiency of Institutions & Players

- **Definition: A measure of the capability to perform acquisition management activities (Transactions) given the Institutions**
- **Results from combination of Labor & Capital available to perform the acquisition (transaction) activities**
 - **Integrated Government, FRDC, AA&S workforce (Labor)**
 - **Acquisition Management (Integrated Schedules, Risk Management, Requirements Process, Software) TOOLS**
 - **Cost Estimators with appropriate tools (ACE-IT)**
 - **Earned Value Management (EVM)**
 - **AFMC Center Campuses (Infrastructure)**
- **Efficient level of acquisition capacity minimizes product and transaction costs for given value of system obtained**



Economic Relationships

Total (System) Cost Curve



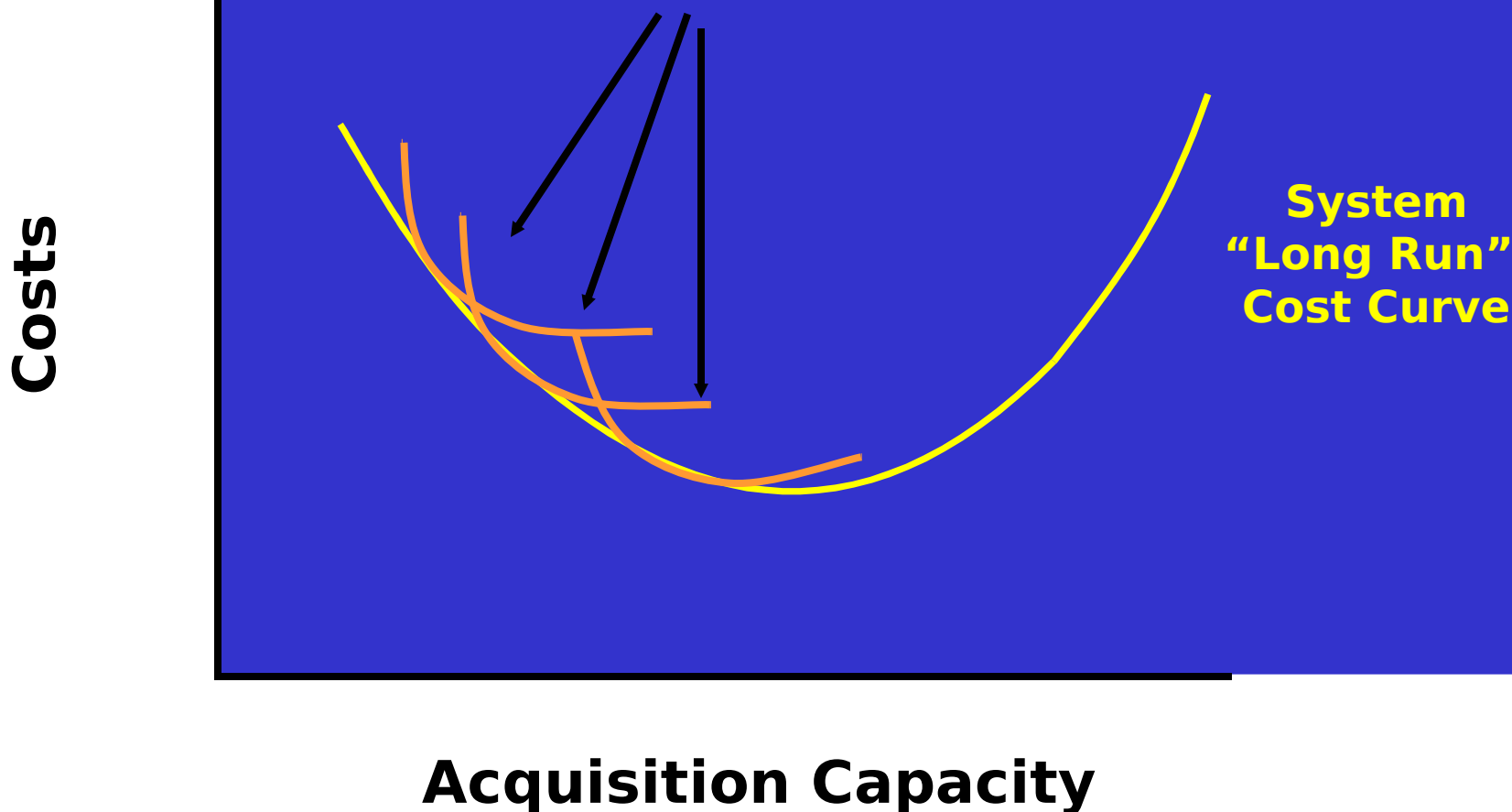
Acquisition Capacity

(A measure of performance given the institutions and the player)



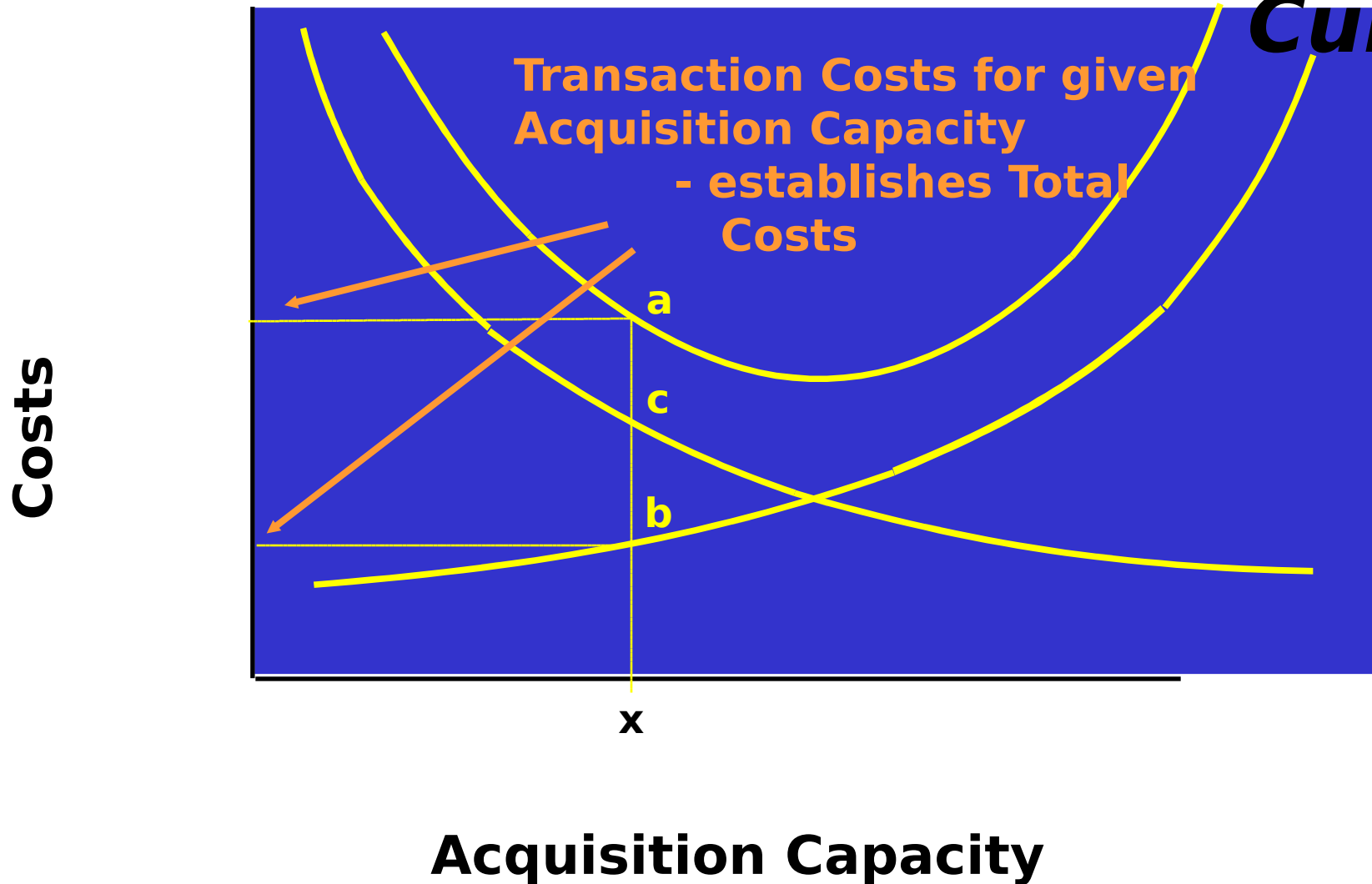
Long Run Average-Cost Curve Theory

Curve is envelope of short-run average-total-costs curves for each "Production" run in the System





Economic Relationships Total (System) Cost Curve





Economic Relationships Potential Errors

- **Three possible placements on the Curve**
 - **Optimal point hard to obtain and hold, others considered errors**

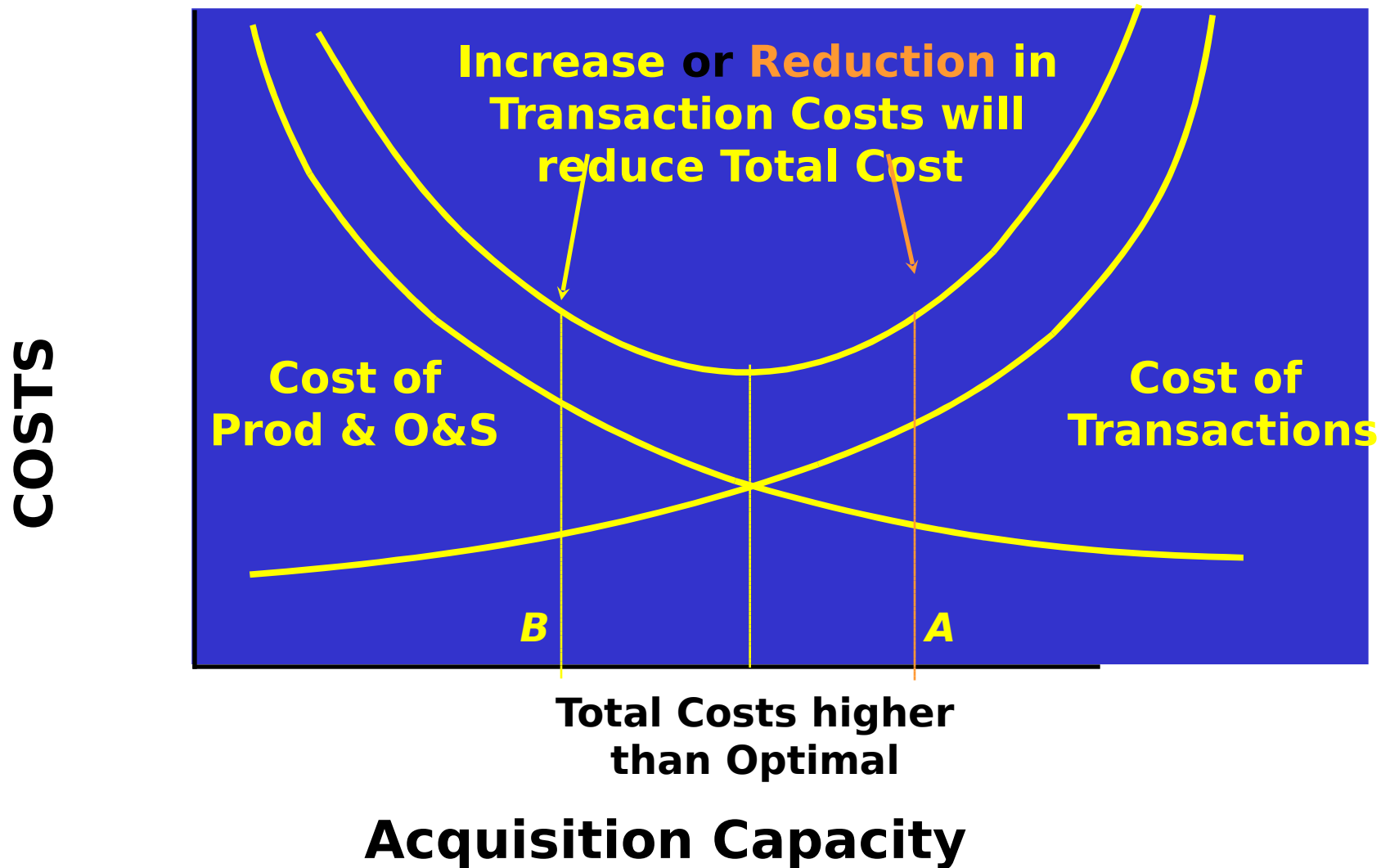
“A” Error

“B” Error

Definition	Spent too much on Transaction Activities	Spent too little on Transaction Activities
Example	Major System Processes on COTS purchase	Insight Management on High Risk Modified COTS



A & B Error





Summary of the Economic Interpretation

- Engage the Debate utilizing Economic Concepts and Language
 - The Scarce resource is the Total Budget (Total Costs)
 - We make the Choice in PPBS
 - Specialization in **Transaction Activity** is **necessary** for Exchange
 - Marginal Analysis accomplished to optimize (Economic Efficient)
- Focus Debate on broader view of Value = Benefit - Costs
 - What management capacities are needed ?
 - How should the Transaction Costs be managed?



Explore alternative Framework

- **Dynamics between various changes**
 - **RULES (policies and regulations)**
 - **TECHNOLOGY (Systems to System of Systems)**
 - **MECHANISMS of Exchange (Organizational Structures and Joint Operations)**

- **Unique Market Framework with Government Involvement**
 - **Spending Cycles and political process**
 - **Monopsony with control of sales and what is produced**
 - **Hyper influence on the institutions governing exchange**



Industrial Policy Report

- Six Primary areas of concern ...inhibit emerging defense suppliers
 - Insufficient visibility into the military enterprise
 - Inadequate funding and advocacy for new technology transition
 - Difficulty building a strong, interactive relationship with customers
 - Cumbersome system design specifications
 - Lengthy, laborious sales cycles
 - Limited access to development and investment capital

- Review just two of these today...they are relate to transaction costs

JDAM (GPS smarts on a dumb bomb) and Deep Water Program (Coast Guard replacement for deep water operations that exclude military equipment) are used as examples of DoD efforts not to use “Cumbersome System Design Specification”



Industrial Policy Report

Why do we abandon TSPR?

A final reason that emerging defense suppliers have had difficulty delivering advanced technologies and solutions to the U.S. military is the indirect supplier customer relationship imposed upon them by the Total System Performance Responsibility (TSPR) system. The Department of Defense's elimination of TSPR and other changes in the acquisition system should allow companies to have [more direct interaction with the military](#). Another step in the right direction is DoD's initiative to limit the bundling of smaller contracts, which has improved the ability of small businesses to win government contracts. Nevertheless, many emerging defense suppliers feel that many RFPs are still written with a focus on systems bundling and at such a broad integration level that only prime contractors can bid. Emerging suppliers are forced to transfer their technologies to a systems integrator rather than work with end users to [deliver a solution](#) that best addresses the military's needs.



The Consolidation Situation

Does it improve the market?

- Gansler (80) notes several trends of the 70's companies
 - “one may become a Navy supplier and the other an AF supplier, and the small amount of supplier **competition** that might have existed is eliminated.” (pg 36)
 - “heavy involvement of the government in the operation of the firm. This naturally leads to a **great deal of specialization**, since few firms are familiar with the government's unique way of doing business.”
 - “concentration...not unusual” at top 100 control 70%
- Gansler (95) pursues dual use in plants vice firms
 - Notes problem is not technology, but **procedures** (pg 122)
 - Call it “intrusive oversight”...to political “interest groups”